Division Of Environmental Health
Solid Waste Program
410 Willoughby Avenue, Suite 105 **Telephone: (907) 465-5162**
Juneau, Alaska 99801-1795 **Fax: (907) 465-5362**
http://www.state.ak.us/dec/home.htm

July 21, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Harvey Hansen, Public Works Director
City of Ketchikan
334 Front Street
Ketchikan, Alaska 99901

RE: Solid Waste Permit # 9413-BA001

Dear Mr. Hansen:

The Department of Environmental conservation has completed its evaluation of your permit application dated May 25, 1999 with closure plan dated October 13, 1998 to operate the baling plant with composting process and the disposal of regulated asbestos waste, dewatered sewage sludge with screenings, construction/demolition debris and the emergency disposal of municipal solid waste at the City of Ketchikan inert waste disposal facility. The Department is issuing this permit in accordance with AS 46, 18 AAC 14, and 18 AAC 60. Please review the conditions and stipulations in the permit and ensure they are all understood. This permit is effective upon issuance and expires July 21, 2004.

Any person who disagrees with this decision may appeal by requesting an adjudicatory hearing, using the procedures contained in 18 AAC 15.200-310. Hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Juneau, Alaska 99801-1795, within 30 days of receipt of this letter. If a hearing is not requested within 30 days, the right to appeal is waived. Even if an adjudicatory hearing has been requested and granted, all permit conditions remain in full force and effect.

Sincerely,

Heather T. Stockard
Solid Waste Program Manager

HTS/GM/sp (g:\es\sw\permits\9413-BA001)

Enclosure: *Permit #9413-BA001

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL HEALTH
410 WILLOUGHBY AVENUE, SUITE 105
JUNEAU, ALASKA 99801

INERT
SOLID WASTE DISPOSAL PERMIT

CITY OF KETCHIKAN SOLID WASTE DISPOSAL FACILITY
KETCHIKAN, ALASKA

PERMIT #9413-BA001 DATE ISSUED: July 21, 1999

This permit is issued to City of Ketchikan for the management and operation of a inert solid waste disposal facility. It authorizes operation of the baling plant with composting process and the disposal of regulated asbestos waste, dewatered sewage sludge with screenings, construction/demolition debris and the emergency disposal of municipal solid waste. The landfill is located at the Deer Mountain foothills area near Ketchikan within Section 29, Township 75 South, Range 91 East, Copper River Meridian. Operation of this facility is subject to the design and plans submitted in the closure plan dated October 13, 1998 and application dated May 25, 1999, the conditions contained in the permit, and the solid waste regulations. Modifications may be requested by the permittee but must be authorized in writing by a permit amendment.

This permit is subject to the conditions and stipulations contained in the following Appendices:

This permit is issued under provisions of Alaska Statutes 46.03, the Alaska Administrative Code, Title 18, Chapters 15 and 60, as amended or revised, and other applicable State laws and regulations.

This permit allows for disposal of the above mentioned items as specified in section II of this permit. All wastes shall be disposed into the cells designated specifically for their use as described in the May 25, 1999 permit application.

A portion of the landfill received municipal solid waste for several years until approximately 4 years ago when the city began to transship solid waste. Since then no municipal waste has been disposed. Under this permit, the area that received municipal solid waste will be closed with a relatively impermeable cover system according to 18 AAC 60.395 closure standards for a class I/II landfill. After closure, a cell will be developed above it that will allow for the disposal of sewage sludge with screenings. Municipal solid waste is also allowed to be disposed at this cell in the event of an emergency.

The department approves your request for a waiver from regulation 18 AAC 60.395(a)(2) that requires permeability no greater than $1x10^{-5}$ cm/sec in the final cover system. Instead, the City of Ketchikan will use locally available materials that have been demonstrated to be slightly less than this standard. The proposed cover system will have permeability no greater than $4.5x10^{-5}$ cm/sec. The locally available material will reduce infiltration through the final cover to a similar degree as the standard regulatory cover. Analysis of downgradient surface water monitoring over the past 5 years (since the landfill stopped disposing municipal waste) has improved remarkably. We believe this cover system will prove to be effective in preventing any further exceedances of water quality standard related to the areas of the landfill that previously accepted municipal waste. Therefore, this proposed alternative action would provide equal or better environmental protection and public health protection than compliance with the identified provision. Additionally, you have demonstrated that all other options that produce a cover system that provides the $1x10^{-5}$ cm/sec permeability will cost significantly more than the proposed locally available cover system. The relative environmental benefit of a cover system which meets regulatory standard would not be great compared to the cover system with the locally available material.

The above mentioned final cover system for the municipal waste portion of the landfill may be vulnerable to stress and subsidence due to the low plasticity of soils used. The department requires that a quality assurance plan be submitted and approved before the cover system is installed.

An area at the northwest aspect of the landfill is planned to receive inert waste. This area has a steep toe of slope that needs containment. The city plans to build a retaining wall in this area in order to effectively hold the waste. We ask the design for the retaining wall be approved prior to the closure of the municipal sold waste portion of the landfill and that waste not be placed into this sloped area until there is an approved design. The retaining wall should be designed for a maximum credible earthquake event.

Disposal of waste specified in section IV of this permit is prohibited and is considered a violation of Alaska Administrative Code. Other types of waste disposal may be requested by the permittee, but must be authorized by approval, permit modification or a permit amendment.

Groundwater monitoring as required by 18 AAC 60.820 - 18 AAC 60.860 is not required for this disposal facility under this permit. The landfill is for all intents and purposes unmonitorable for the following reasons:

1. The development of a groundwater monitoring system at the landfill would involve drilling many wells to an undetermined depth through dense bedrock until water was encountered.

2. If encountered, water would most likely exist in cracks or fissures in fractured bedrock.
3. The data rendered from the fractured bedrock would be of questionable value because of the difficulty involved in associating the water from a fracture with that of the landfill.

If a meaningful groundwater monitoring system in the area were possible, it would involve hydrogeological practice beyond that which would normally be used to develop a water supply. This would likely be prohibitively expensive. There are no known water supplies in the area, which use or will likely use groundwater because of the expense and uncertainty involved in developing one. For these reasons compliance with groundwater monitoring regulations would cost significantly more than the value of the environmental benefit or public health risk reduction.

The department believes that surface water monitoring is the most practical and cost-effective way to detect releases from the landfill. The bedrock foundation of the landfill acts to restrict the downward movement of water. Except for small amounts of leachate that may access small cracks in the bedrock, most landfill-related leachate is expected leave the facility on the surface. The requirements in section V specify surface water monitoring stations, frequency of sampling, test methods, and reporting limits to be followed.

This permit is effective upon issuance and expires July 21, 2004, at which time this permit must be renewed or the facility closed. An application for renewal must be received at least 30 days before this permit expires. The Department may terminate or modify this permit in accordance with AS 46.03.120.

Heather T. Stockard
Solid Waste Program Manager

APPLICATION COMPLIANCE

I. This permit is based on the closure plan dated October 13, 1998 and application dated May 25, 1999 for the operation of the existing landfill, baler facility and compost process. The permittee must comply with the designs and plans in those documents unless otherwise specified in this permit. Additional modifications may be requested but must be authorized by a permit amendment signed by the Solid Waste Program Manager before that modification is effective.

II. Upon any change in land ownership, the permitee shall submit a copy of the deed or another legal document that identifies the landowner and

A. a copy of any lease agreement that is clearly relevant to the waste disposal activity, or

B. a written statement signed by the landowner, showing that the landowner consents to the proposed activity.

PERMIT CONDITIONS

I. SITE DEVELOPMENT

The permittee shall:

A. ensure a gate with a lock is maintained at all entrances to the landfill and baler facility,

B. ensure that access roads and on-site roads are kept passable by the operator when open to the public,

C. ensure that signs are posted at appropriate areas of the landfill in order to direct the public on the proper disposal of waste,

D. maintain a readable sign at the entrance to the landfill which includes the following information:

1. identification of the area as a permitted waste site, including the permit number;
2. the name of the permittee and phone number(s) to call to report problems;
3. notify users that domestic and commercial waste must be taken to the baler (if applicable) facility for processing prior to disposal;
4. user information such as operating hours, restrictions and any special disposal instructions;
5. indicate that some waste types are prohibited at the facility, such as hazardous waste, and list some of the more common prohibited wastes such as oil, sewage, liquid

septage, commercial fish processing waste, explosives, petroleum solvents, radioactive material, etc.

6. indicate that vehicle waste loads must be covered or secured.

E. control drainage from the facility to prevent a water quality violation at or beyond the facility boundary,

F. construct and maintain surface water control structures at the facility. The surface water control structures shall prevent surface water run-on from flowing into previously disposed or stored waste and facilitate effective run-off of surface moisture from the site,

G. ensure that drainage control structures are graded and maintained to prevent ponding and erosion and to prevent water from entering the solid waste,

H. provide a series of water quality monitoring stations according to the closure plan dated October 13, 1998 and application dated May 25, 1999. Water quality monitoring shall be conducted in accordance with section V of this permit and the permit application,

I. prevent or correct a hazard from decomposition gas caused by the wastes or their interaction with the environment,

J. conduct an explosive gas monitoring program in accordance with the closure plan dated October 13, 1998 and application dated May 25, 1999, and section V of this permit,

K. maintain a minimum horizontal separation distance of 50 feet between the designated portion of the balefill or landfill facility and the landfill boundary, and,

L. separate areas designated for junk vehicles and other salvageable materials from any areas of putrescible waste disposal by a distance of at least 50 feet.

II. SITE OPERATION REQUIREMENTS

A. Operations Plan

The permittee shall:

1. ensure all operations and maintenance of the facility are performed in accordance with the operations plan narrative submitted with application dated May 25, 1999 unless otherwise specified in this permit,

B. Site Access

The permittee shall:

1. ensure the public is prohibited from access to the site except for disposal activities only. The viewing of bears is prohibited, and,

2. limit access to other areas of the landfill to prevent unauthorized dumping in closed sections of the facility.

C. Attendant On Duty

The permittee shall:

1. ensure all attendants are trained to recognize and handle spills of hazardous substances, fire protection, medical first aid, and personal protection and safety. The training shall be on-going, and certifications as appropriate kept current,

2. conduct a hazardous waste exclusion program by randomly inspecting incoming loads for hazardous waste,

3. ensure that an attendant is on duty at the landfill or baler when the facility is open to the public,

4. close the landfill and baler facility entrance with barriers or a locked gate when an attendant is not present at the facility, and,

5. although not required, it is recommended an EPA/SWANA certified operator be present at the facility at all times.

D. Litter

The permittee shall:

1. prevent windblown and littered wastes from creating a nuisance,

2. ensure that litter is kept in the designated portion of the landfill and baler facility by litter control fencing or other approved means, and,

3. ensure litter is removed from access roadways, closed portions of the facility, inactive portions of the facility and adjacent areas outside of the landfill boundary.

4. collect littered waste and returned to the active disposal cell or baler facility for baling on a regular basis as needed.

E. Wildlife and Vector Control

The permittee shall:

1. develop an effective rodent eradication program if rats are encountered at the facility,

2. keep stray pets and domestic animals out of the waste facility,

3. prevent bears and vectors from accessing deposited waste during the time that waste is placed at the site,

4. prevent bears and vectors after waste is disposed at the site, and,

5. prevent bears and vectors in areas where waste is stored or handled before disposal,

F. Combustion of Solid Waste

The permittee shall:

1. prohibit open burning of solid waste unless specific approval on an individual basis for such disposal is obtained from the department,

2. if approval is given to perform an open burn, ensure that open burning does not cause black smoke, adverse public health or environmental impact, or nuisance. Wastes that cause black smoke, toxic or acidic gasses, or particulate matter are not allowed to be burned at this facility. Prohibited wastes include pesticides, halogenated organic compounds, cyanic compounds, polyurethane products, asphalt, rubber products, plastics, tars, oils, oily wastes, contaminated oil clean-up materials or any material that causes black smoke. The person who conducts an open burning shall ensure the burn achieves maximum combustion efficiency throughout the duration of the burn. The public is not allowed to be exposed to the products of a burn,

3. ensure that any incineration of waste complies with the Air Quality Control Regulations 18 AAC 50,

4. ensure incinerator fly ash is contained and covered during disposal in a way that prevents any release of ash to the air. Burial of bagged fly ash with unbagged bottom ash will be an acceptable method, and,

5. except for ash from the combustion of clean wood, paper or silvicultural debris, the deposited waste or residue from burned waste shall be consolidated and compacted daily and operational cover of at least six inches of soil, effectively composted material, or shot rock shall be applied to the waste. The solid waste shall be compacted in two-foot increments, and is compacted before applying operational or final cover.

G. Salvaging and Storage of Waste at the Facility

The permittee shall:

1. ensure that salvaging, if allowed by the operator, is done in an approved area and in a manner that does not hinder site operations or create a health or safety hazard or nuisance,

2. store all scrap metal and junked vehicles and equipment stored at the site before shipment to recycling markets in a way to prevent leakage of pollutants, such as antifreeze, petroleum products, and battery acids, into the ground. All vehicles and equipment shall be drained of all antifreeze and petroleum products before disposal at the site. All drums or barrels shall be crushed before landfilling,

3. ensure that any stored waste is:

   a. stored in a safe and sanitary way that prevents a litter violation under AS 46.06.080;
   b. stored in a manner that prevents the attraction or access of wildlife or disease vectors to putrescible waste.

4. ensure that municipal waste bales are stored within the baler plant, or otherwise protected from vectors and exposure to weather, prior to transshipment or placement at the landfill, and

5. store regulated waste in such a manner to prevent health hazards or contamination to the environment.

H. Baler Plant Operations

The permittee shall:

1. ensure the baler plant is operated in a safe and clean manner. Tipping floor will be swept clean and rinsed down at the end of each operating day. Litter shall be collected regularly, on an as needed basis,

2. ensure storage containers for hazardous and recyclable materials, and salvage areas are maintained regularly so that sufficient space is available for materials and to minimize health and safety hazards,

3. ensure operators receive training on recognition and screening procedures for prohibited materials (and materials not suitable for baling). Wastes will be screened on the tipping floor prior to baling or disposal into the landfill. Prohibited items will be pulled from the waste stream and handled/stored in an appropriate manner, and,

4. ensure that liquid from the operation of baler facility is sent to the Ketchikan wastewater treatment facility or another permitted wastewater facility capable of accepting the water. In the case a holding tank is used, it shall be emptied on a frequency necessary to prevent overflow of the storage tank.

I. Waste Disposal and Burial

1. General. Related to all waste disposal areas within the permitted boundary of the facility.

The permittee shall

a. ensure that litter, dust, odor, noise, traffic, and other effects from the operations at the facility do not become a nuisance or hazard to the health, safety, or property of persons at the facility or outside the facility boundary,

b. provide surface grading as needed to prevent surface ponding and runoff water from flowing over, into, or through deposited solid waste, or from accumulating in a disposal cell,

c. manage the facility to prevent a water quality violation,

d. manage the facility to prevent wildlife, domestic animal, and/or disease vector attraction, and,

2. Municipal Solid Waste (contingency cell)

The permittee shall

a. dispose of baled or unbaled municipal solid waste, animal carcasses, and/or medical waste at the contingency cell according to the closure plan dated October 13, 1998 and application dated May 25, 1999,

b. ensure that only one working face for baled or unbaled municipal waste is exposed at any one time. The working face shall be kept as small as practical,

c. cover bales at the end of each operating day with an impermeable cover material, which is secured to the bales,

d. consolidate, compact and cover all deposited waste with a minimum of six inches of soil by the end of each operating day. The exposed vertical face of deposited waste is to be covered with a tarp, or similar material, to reduce water infiltration, vector attraction, odors, and wind-blown litter, during times when the working face is not actively being worked,

(Use of alternative cover material, such as remediated soils, must be approved in writing by the Department prior to use.)

e. unbaled municipal waste, fish and/or animal carcasses may be placed in the contingency cell in the event of a baler breakdown or interruption in transshipment or to modify slopes of the vertical sides of baled waste as necessary. This waste must be consolidated, compacted, and covered with a minimum of 6 inches of soil by the end of each operating day or at more frequent intervals if necessary to control disease vectors, fire, odor, blowing litter, animals, or scavenging,

f. ensure deposited waste not allowed to deteriorate because of the following conditions:

1. surface run-on water contact with baled refuse
2. rain water or snow melt contact with the baled refuse

g. prevent bear and wildlife contact with deposited waste at all areas of the landfill including the active working face,

h. ensure that an intermediate cover of at least 18 inches of graded and compacted dirt or rock is applied to all areas of the landfill where putrescible

waste has been buried; and, where the area will not be used for disposal within 90 days after the last waste deposition. Intermediate cover shall meet a permeability standard of no greater than $1x10^{-3}$ cm/sec hydraulic conductivity. Additionally, intermediate cover will prevent bears and other wildlife from accessing the waste,

i. ensure that a final cover is established:

1. to areas that will not receive more waste within the year; or
2. to areas that have been filled to the final design elevation;

j. ensure final cover has a permeability standard of no greater than $4.5x10^{-5}$ cm/sec hydraulic conductivity. Final cover shall be applied to allow run-on water to enter surface run-on control features, and,

k. ensure that final and intermediate cover material is compacted, graded and maintained to prevent ponding and erosion and to minimize the amount of water passing through the cover material.

3. Construction & Demolition Waste

The permittee shall

a. ensure that all non-salvageable containers (barrels, tanks or drums) are empty of fluids, have one end removed, and are crushed prior to burial. All fluids removed from the drums shall be properly containerized and disposed of in accordance with applicable State and Federal laws,

b. ensure that oil filters are hot drained prior to disposal,

c. ensure that only one disposal cell, for inert waste and demolition debris, is active at any one time,

d. ensure that any deposited vehicles are free of all liquid petroleum products and batteries,

e. cover all deposited waste with a minimum of six (6) inches of soil material if the disposal cell is expected to be inactive for longer than 30 days, and,

f. ensure the fill for inert or construction/demolition waste is compacted and graded to a 3(H):1(V) slope. The individual cell height shall not exceed 22 feet.

4. Sewage Solids Disposal and Compost

The permitee shall

a. dispose of dewatered sewage solids in accordance with the site plan submitted to the department on May 25, 1999 with closure plan dated October 13, 1998. Only one cell may be active at any time,

b. disposed of treated sewage solids that meets the vector reduction requirements in 40 CFR 503.33(b)(11), adopted by reference in 18 AAC 60.505, or one of the

1. Class A or Class B pathogen reduction requirements in 40 CFR 503.32, adopted by reference in 18 AAC 60.505; and

2. the vector attraction reduction requirements of 40 CFR 503.33(b)(1) – (10), adopted by reference in 18 AAC 60.505.

c. ensure sewage solids contain no less than 10% solids by weight and contains no free liquids as defined by EPA Method 9095 (Paint Filter Liquids Test) at temperatures above freezing,

d. add lime as necessary to the sludge and/or screenings after disposal in order to control odors and dissuade vectors,

e. ensure sewage solids are covered by at least 6 inches of soil by the end of the operating day that the material is disposed,

f. take immediate measures to disinfect the affected area with lime and move the contaminated material into the disposal cell in the event of any spills of sewage sludge outside the disposal area, and,

g. ensure that sewage sludge compost or other compost, is done so:

1. in accordance with other state and federal regulations.

2. to prevent an odor nuisance.

5. Asbestos Disposal

The permittee shall:

a. deposit asbestos only in the area of the solid waste site designated, surveyed and incorporated into as-built drawings for the facility,

b. post signs at the disposal location in one inch or taller lettering:

ASBESTOS WASTE DISPOSAL SITE
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH

c. bury as soon as possible or keep within a covered area asbestos when it arrives at the disposal site. Open air storage of containerized asbestos is not permitted; properly packaged asbestos waste must be stored in a secure area that is not accessible to the public,

d. ensure any vehicle used for transportation of containerized asbestos waste has an enclosed carrying compartment or use a canvas covering sufficient to contain the transported waste, prevent damage to the containers, and prevent fiber release,

e. ensure that a landfill operator supervises all disposal of asbestos. That landfill operator shall maintain a log of the source and quantity of asbestos delivered to the site,

f. ensure a certified asbestos handler supervises all placement of asbestos materials,

g. ensure all loads are inspected to verify that friable asbestos wastes are properly contained in leak tight containers with appropriate labels, and that the outside of the containers are not contaminated with adhering asbestos debris,

h. ensure there is no disposal of any asbestos wastes that are not packaged to specifications,

i. ensure all containers of friable asbestos bear warning labels that state either:

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOU HEALTH

or

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
MAY CAUSE SERIOUS BODILY HARM

j. place asbestos wastes carefully to avoid breaking the material or container. Particular care shall be taken with plastic bags, because they may break under pressure and emit asbestos particles,

k. ensure asbestos wastes and containers are covered with at least six (6) inches of non-asbestos containing material by the end of each day of waste deposition,

l. ensure final cover of at least two feet is applied within 90 days after the last waste deposition to areas that will not receive more waste within one (1) year,

m. maintain the integrity of the soil cover, slopes, vegetation, and drainage structures,

n. annually update as-built or record drawings that show the location and volume of waste deposited at the asbestos waste disposal site, and file those drawing with the ADEC when the site is closed, and,

o. provide a record to subsequent landowners that asbestos waste has been buried on the property and that it will be hazardous to attempt to excavate that area. The locations of the asbestos deposit shall be conveyed in the land title or deed document.

6. Other Special Wastes

The permittee shall:

a. ensure MARPOL waste disposed at the landfill is incinerated or treated in accordance with APHIS and MARPOL standards,

b. ensure that pathological or infectious waste is first disinfected or sterilized, and then packaged to prevent a health hazard, or is incinerated in a pathological-waste incinerator before accepting at the landfill, and,

c. ensure all animal carcasses are incinerated prior to disposal at the landfill.

7. Miscellaneous

The permittee shall in the case cultural or paleontological resources be discovered as a result of this activity, we request that the work which would disturb such resources be stopped, and that the Office of History and Archaeology, Division of Parks and Outdoor Recreation, Department of Natural Resources, be notified immediately (762-2622).

III. REPORTING AND RECORDKEEPING REQUIREMENTS

A. The permittee shall maintain an ? operating record? for the facility. The record must consist of:

1. the permit application and the permit,

2. the solid waste management/operating plan,

3. records of the monthly visual inspection reports,

4. inspection records, training procedures, and notification procedures,

5. any as-built drawings or other maps of the landfill,

6. records of water quality monitoring and explosive gas monitoring,

7. incident and nuisance reports,

8. property deed information, and,

9. financial assurance documentation.

B. The records must be retained at a location that is readily accessible by employees working at the facility and be available for department review. Upon request, the permittee shall furnish the operating record to the department, or shall make it available at reasonable times for department inspection.

IV. PROHIBITIONS AND SPECIAL RESTRICTIONS

The permittee shall:

A. prohibit the disposal of hazardous waste, as defined by 40 CFR Part 261. Waste meeting this definition must be disposed of in accordance with 40 CFR Part 262, Standards Applicable to Generators of Hazardous Waste,

Note: in the case of disposal of municipal waste in the contingency cell at times of emergency, the disposal of household hazardous waste is not prohibited

B. prohibit the disposal of liquid petroleum products, waste oil, contaminated soil, septic tank pumpings, untreated sewage, unsterilized medical waste, commercial fish processing waste, chemical waste, pesticides, radioactive material, solvents, acids, corrosives, lead-acid batteries, polychlorinated biphenyl (PCB) fluids, and explosives. If a hazardous substance or hazardous waste is found to have been deposited at the site, the permittee shall report the incident to the department?s Juneau solid waste program office,

C. require that all containers for disposal which exceed 25 gallons in size are open and empty of fluids prior to acceptance at the facility to ensure that no oil or hazardous waste liquids are deposited in the landfill, and,

D. require that bulk or noncontainerized liquid waste are not placed in the landfill. Containers holding liquid waste may not be placed in the landfill unless the container holds one gallon of liquid or less.

V. VISUAL, WATER QUALITY, EXPLOSIVE GAS MONITORING AND CORRECTIVE ACTION

A. Visual Monitoring.

1. The permittee shall ensure that a person who is familiar with permit requirements and with the monitoring and operations plan, conduct a visual inspection of the facility once each month and document this inspection using a visual inspection checklist.

2. The permittee shall establish a path along the lower aspects of the landfill facility downgradient of the leachate collection system near the landfill boundary. The purpose of the path will be to conduct visual monitoring of the landfill and to observe for leachates.

3. The monthly visual inspection must document:

   a. any violations of the permit conditions or the Solid Waste Regulations (18 AAC 60) especially as it relates to placement of waste material into surface water or the discharge of leachate or runoff from the facility,
   b. signs of damage or potential damage to any component of the facility from settlement, ponding, leakage, thermal instability, frost action, erosion, thawing of the water, or operations at the facility,
   c. evidence of death or stress to fish, wildlife, or vegetation that might be caused by the facility,
   d. fire or combustion in the waste,
   e. erosion, a crack, or other damage to the visible portion of an intermediate or final cover system,
   f. escape of waste or leachate or any unathorized waste disposal,
   g. damage to the above-grade portion of a surface water monitoring device,
   h. evidence or presence of bears at the facility since the last visual monitoring inspection,
   i. adequate treatment and/or cover of sewage sludge, municipal waste, medical, special waste or construction and demolition waste,
   j. all on-site roads allow for safe passage to the baler and designated disposal areas inside the landfill,
   k. fences and gates in good repair, and
   l. litter is removed from fences and from around the baler and landfill facility.

B. Water Quality Monitoring

1. Sampling

The permittee shall submit the results of semi-annual grab samples of surface water from the four sampling stations as described in the closure plan dated October 13, 1998 and application dated May 25, 1999 and depicted on the site map submitted by the City of Ketchikan from these materials.

Samples shall be taken semi-annually during high flow and low flow conditions of each year and submitted to the department as soon as the complete set of analysis becomes available. Samples shall be analyzed using approved EPA methods that attain the reporting limits specified in Part 5,B,3 of this permit.

2. Leachate seeps observed during visual monitoring that are not connected to the drainages which are sampled under the monitoring plan dated May 25, 1999 and which pass the facility boundary shall be monitored at the facility boundary for the parameters specified in section 5,B,3 of this permit. The department shall be notified of the results when they become available. The department will determine the extent of further sampling if needed.
3. Test Procedures

Test procedures for analysis of pollutants shall conform to methods cited in 18 AAC 70.020(c), or as such regulations may be amended using EPA methods for the following listed elements at the following corresponding reporting concentrations and/or units:

Parameter

Estimated Flow (cfs or gpm) – taken only at stations SWL#1 and SWL#2
Visual Observation (odor, texture, growth, etc.)
pH
Conductivity (mS/cm)
Temperature (degrees F)
Color (Cobalt Units)
Dissolved Oxygen (mg/l)
Turbidity (NTU)
Hardness (mg/l)
BOD (mg/l)
COD (mg/l)
TSS (mg/l)

Parameter	**Reporting Limits**
Dissolved Metals (filtered samples)	
Cadmium	< 9.3 ug/l
Chromium	< 50.0 ug/l
Copper	< 2.9 ug/l
Lead	< 5.6 ug/l

Mercury	< 0.025 ug/l

Total Recoverable Metals (unfiltered samples)

Aresenic	< 36.0 ug/l
Iron	< 1000 ug/l
Nickel	< 7.1 ug/l
Selenium	< 54.0 ug/l
Zinc	< 58.0 ug/l

The permittee may substitute alternative methods of monitoring or analyses only upon receipt of prior written approval from the department.

4. The permittee shall submit with the results of analysis:

   a. record national weather service weather information for the day samples were taken and two days before, and
   b. date and time samples were taken.

5. Records retention

   All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed, calibration and maintenance of instruments, and recordings from continuous monitoring instrumentation, shall be retained in Alaska for observation by the department for three years after expiration of the permit. Upon request from the department, the permittee shall submit certified copies of such records.

C. Explosive Gas Monitoring

1. Methane shall be monitored at least four times per year at crawl spaces and work areas inside the baler building and around the perimeter of the landfill at times of decreasing atmospheric pressure. Monitoring for methane will be conducted when the barometer is at or below 30.0 inches Hg. The permittee may substitute alternative frequency of monitoring only upon receipt of prior written approval from the department.

2. The results of explosive gas monitoring, including details about the dates, times of day, weather conditions, atmospheric pressure, and specific sampling stations, shall be reported to the Department quarterly, on March 1, June 1, September 1, and

December 1, unless methane concentrations indicate more frequent sampling and reporting is necessary.

3. If methane gas concentrations ever exceed 25% of the LEL (12,500 ppm) in facility structures or 100% of the LEL (50,000 ppm) at the landfill boundary, the department shall be immediately notified. The specific corrective action necessary, such as installation of active or expansion of the passive gas ventilation system shall be determined in consultation with the Department.

D. Corrective Action

If a structural change or damage to the facility occurs; or, a violation of a permit condition is observed during visual or surface water monitoring, or during a department inspection; the permittee shall take action to correct the change, damage, or violation to prevent the escape of waste or leachate, and to clean up any waste that may have been disposed of in a unauthorized manner.

VI. CLOSURE/POST CLOSURE STANDARDS

A. Closure

The permittee shall:

1. provide closure of the landfill according to the closure plan dated October 13, 1998 and application dated May 25, 1999 and closure regulations for a class II MSWLF in 18 AAC 60.395 for all parts of the landfill which received municipal solid waste, and,

2. provide closure of all areas of the landfill which receive waste other than municipal solid waste as follows:

   a. consolidate, compact and cover all deposited solid waste with a minimum of 24 inches or another thickness approved by the department of soil the last 6 inches of which is capable of being revegetated within 90 days after the last waste is deposited or to areas that have been filled to the final design elevation,

   b. compact and grade all side slopes no steeper than 3(H):1(V) except previously stabilized portions of the south slope per closure plan,

   c. compact and grade all upper surfaces so that water will not pond or create erosion, and

d. revegetate all exterior surfaces with a short rooted native grass species within the first growing season after closure,

B. Post-Closure Care

The permittee shall:

1. provide an acceptable written post-closure care plan within 180 days prior to closure of any part of the landfill,

2. upon completion of final closure, record a notation on the deed to the landfill facility property, or some other instrument that is normally examined during a title search, and submit written notification to the department that the notation has been recorded and that a copy has been placed in the operating record. The notation on the deed must, in perpetuity, notify any potential purchaser of the property that the land was used as a disposal facility and the type of waste that was buried there, the property may not be suitable for some uses, maintenance and repairs to the property might become necessary to prevent pollution problems, and any activity that results in damage to the final cover of the property must be corrected to control potential pollution problems,

3. upon completion of final closure, prepare a survey as-built or record drawings showing the location and volume of waste deposited at the various locations of the solid waste disposal site and file those records with the Department's Juneau Solid Waste Program Office. The as-built drawing shall be signed and sealed by a registered engineer or otherwise approved by the department,

4. file the survey as-built or record drawings of the area used as a landfill with an appropriate land records office within sixty (60) days after the final closure of the site and submit proof of such recording to this Department,

5. conduct post-closure care for thirty years following the closure of the landfill according to 18 AAC 60.397, and

6. conduct post-closure care for all parts of the landfill with at least the following:

a. maintenance of the integrity and effectiveness of the final cover, slopes, vegetative cover, and drainage structures, including making repairs as necessary to correct the effects of settlement, subsidence, ponding, erosion, frost action, thermal degradation, and prevent run-on and run-off from eroding or otherwise damaging the final cover,

b. ensuring that someone familiar with the site or the closure requirements conduct visual monitoring inspections of the facility annually during the month of September. This monitoring my be required for a longer period if the Department determines the facility poses a risk to public health or safety or to the environment,

c. submittance of a copy of each visual monitoring inspection report to the Department within thirty (30) days after each inspection, and

d. conduct a water quality monitoring program, as specified in Part V of this permit, if deemed necessary by the Department.

VII. GENERAL PERMIT CONDITIONS

A. Access and Inspection.

The permittee shall allow the Commissioner or his/her representative access to the permitted facilities at reasonable times to conduct scheduled or unscheduled inspections or tests to determine compliance with this permit, State laws, and regulations.

B. Information Access.

Except for information relating to confidential processes or methods of manufacture, all records and reports submitted in accordance with the terms of this permit shall be available for public inspection at the State of Alaska Department of Environmental Conservation, Juneau Office, 410 Willoughby Ave., Juneau, Alaska 99801.

C. Civil and Criminal Liability

Nothing in this permit shall relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond his control, including, but not limited to, accidents, equipment breakdowns, or labor disputes.

D. Availability

The permittee shall post or maintain a copy of this permit available to the public at the disposal facility administrative offices.

E. Adverse Impact

The permittee shall take all necessary means to minimize any adverse impacts to the receiving waters or lands resulting from noncompliance with any limitation specified in this permit, including any additional monitoring needed to determine the nature and impact of the noncomplying activity. The permittee shall cleanup and restore all areas adversely impacted by the noncompliance.

F. Cultural or Paleontological Resources

Should cultural or paleontological resources be discovered as a result of this activity, work which would disturb such resources is to be stopped, and the State Historic Preservation Office, Division of Parks and Outdoor Recreation, Department of Natural Resources, is to be notified immediately (907-269-8721

G. Applications for Renewal

In accordance with 18 AAC 15.100(d), applications for renewal or amendment of this permit must be made no later than 30 days before the expiration date of the permit or the planned effective date of the amendment.

H. Other Legal Obligations

The requirements, duties, and obligations set forth in this permit are in addition to any requirements, duties, or obligations contained in any permit that the Alaska Department of Environmental Conservation or the U.S. Environmental Protection Agency has issued or may issue to the permittee. This permit does not relieve the permittee from the duty to obtain any and all necessary permits and to comply with the requirements contained in any such permit or with applicable state and federal laws and regulations. All activities conducted by the permittee pursuant to the terms of this permit and all plans implemented by the permittee pursuant to the terms of this permit shall comply with all applicable state and federal laws and regulations.

I. Pollution Prevention

In order to prevent and minimize present and future pollution, when making management

decisions that affect waste generation, the permittee shall consider the following order of priority options: waste source reduction; recycling of waste; waste treatment; and waste disposal.